

AMENDMENTS TO THE SPECIFICATION

On page 20 of the Clean Copy of the Substitute Specification, please change paragraphs at lines 6, 10, 14, 18 and 24 to add the text "(prior art)" as follows:

Figure 1 (prior art) is a conceptual representation of a base-band modulated composite IF signal that is to be up-converted to one of n RF channels of the prior art.

Figure 2 (prior art) is a conceptual representation of an up-converted base-band modulated composite IF signal to one of n RF channels, along with system noise and distortion components generated by the conversion process of the prior art.

Figure 3 (prior art) is a conceptual representation of a system of channel processors for producing a composite broadband multichannel signal from n base-band signals of the prior art.

Figure 4 (prior art) is a conceptual representation of one of the channel processors of **Fig. 3** for performing frequency conversion of a base-band signal to an RF channel of the prior art.

Figure 5b (prior art) is a conceptual representation of a converted RF output signal and its associated side-band and leakage components generated by the converter of **Fig. 5a** of the prior art.

On page 21 of the Clean Copy of the Substitute Specification, please change paragraphs at lines 1, 4, 8 and 12 to add the text "(prior art)" as follows:

Figure 6a (prior art) is a conceptual representation of a prior art two-stage frequency converter .

Figure 6b (prior art) is a conceptual representation of converted intermediate IF (first stage) and RF (second stage) output signals and their constituent components generated by the two-stage converter of **Fig. 6a** of the prior art.

Figure 7a (prior art) is a conceptual representation of second-order distortion components that are generated by the conversion performed by the frequency converter of **Fig. 6a** of the prior art..

Figure 7b (prior art) is a conceptual representation of the second-order distortion components wherein one of the distortion components is too close in proximity to the converted RF channel component to be filtered without affecting the desired RF output signal of the prior art.

On page 20 of the Clean Copy of the Substitute Specification, please change the paragraph at line 11 to add the text "(prior art)" as follows:

Figure 14 (prior art) is an RF amplifier of the prior art having a push-pull circuit topology.

On page 31 of the Clean Copy of the Substitute Specification, please change the paragraph at line 7 to add the text "222" after "L1" as follows:

One possible embodiment of the tunable notch filters for the general case is now described with respect to **Fig. 11a**. Each notch filter **110, 108** is made up of a pair of varactors D_1 **224**, D_2 **226** and D_3 **234**, D_4 **236** respectively. Each pair of varactors is connected in a back-to-back configuration, and in parallel with an inductance L_1 **222** and L_2 **232** respectively. The varactors act as variable capacitors, their capacitance a function of the voltage across them. Because of the back-to-back configuration, the first-order non-linear characteristics **250, 252** of each varactor in the pairs **224, 226** and **234, 236**, respectively, cancel each other out to produce a response more like **251** as illustrated in **Fig. 11b**. By varying the tuning voltage V_{T1} **220** and V_{T2} **230** of each notch filter, the capacitance of the varactors can be tuned with the inductors L_1 **222**, L_2 **232** respectively such that the voltage across the varactors is at a minimum at the RF channel carrier frequency, and at a maximum at the fundamental frequencies of the distortion component. This voltage/frequency characteristic **260** is illustrated in **Fig. 11c** for the second harmonic of the RF channel frequency component, along with the resulting transfer function **268** of the notch filter.